

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
10 March 2005 (10.03.2005)

PCT

(10) International Publication Number  
**WO 2005/021922 A3**

(51) International Patent Classification?: **F16L 35/00**,  
37/00, 55/00

(21) International Application Number:

PCT/US2004/028438

(22) International Filing Date:

1 September 2004 (01.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/499,528 2 September 2003 (02.09.2003) US

(71) Applicant (for all designated States except US): EN-  
VENTURE GLOBAL TECHNOLOGY, LLC [US/US];  
16200 A Park Row, Houston, TX 77084 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **COSTA, Scott**

[US/US]; 2011 Willow Point, Kingwood, TX 77330 (US).  
**MENCHACA, Jose** [US/US]; 9800 Pagewood Lane,  
Number 210, Houston, TX 77042 (US).

(74) Agent: **HAYNES AND BOONE LLP**; 901 Main Street,  
Suite 3100, Haynes and Boone, LLP, Dallas, Texas 75202  
(US).

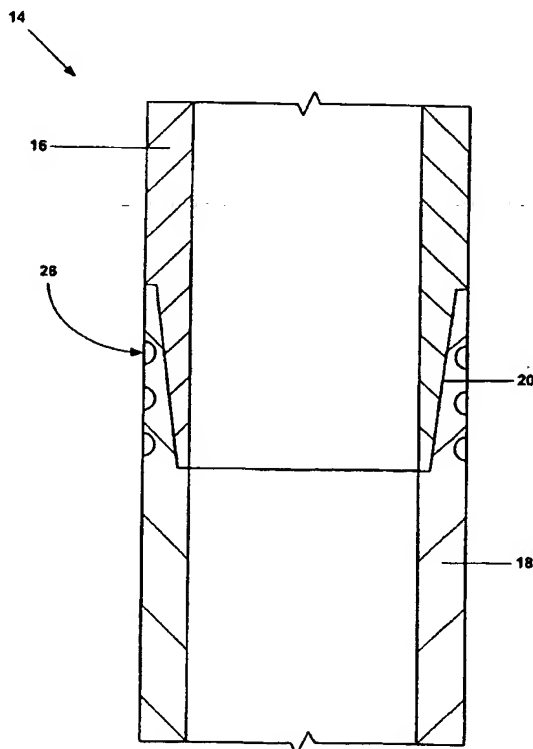
(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: **THREADED CONNECTION FOR EXPANDABLE TUBULARS**

(57) Abstract: A threaded connection (20) for ex-  
pandable tubulars (16), (18) with at least one stress  
concentrator (26).



WO 2005/021922 A3



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— of inventorship (Rule 4.17(iv)) for US only

**Published:**

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

19 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/28438

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F16L 35/00 37/00 55/00

US CL : 285/382, 333, 390, 114, 29/507,522.1,523

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 285/382, 333, 390, 114, 29/507,522.1,523

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WIPO 200201102 A1 (Coulon et al.) 03 January 2002 (03-01-02), see expanded threaded members 11,12 and grooves 21 or 14 which will inherently act as a stress concentrator as applies in the present invention except in claims 18 and 37-39 where no stress concentrator is claimed.	1,3-7,14-20,22-25,27-42
Y	US 6,390,720 A (LeBegue et al.) 21 May 2002 (21-05-02), see column 2, lines 55-65 and stress relief grooves 36 shown internally in fig. 2 and noted to be either single, plural or helical.	8-12,21,26 8-12,21 and 26
X	US 5,667,252 A (Schafer et al) 16 September 1997 (16-09-97), see fig. 3 which shows tube 200 expanded to tube 202.	42 A 1

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

## \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reasons (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"A" document member of the same patent family

Date of the actual completion of the international search

19 January 2005 (19.01.2005)

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Date of mailing of the international search report

Authorized officer

Eric K Nicholson

Telephone No. 703-308-1113